N

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,044	06/14/2001	Naoka Hiramatsu	018775-831	5971

7590 06/29/2005

Planton N. Mandros
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER	
DIVINE, LUCAS	
ART UNIT	**PAPER NUMBER**
2624	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/880,044	HIRAMATSU ET AL.	
	Examiner	**Art Unit**	
	Lucas Divine	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 22 March 2005.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 14 June 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims 1 – 15 are pending.

2. Specification and drawings objections are withdrawn due to appropriate amendments.

3. 35 USC § 112 rejections are withdrawn due to clarifying amendments.

Response to Arguments

4. Applicant's arguments filed 3/22/05 have been fully considered but they are not persuasive.

With respect to applicant's argument on page 11 in regards to claim 8 that "***Okubo* does not teach or suggest any converter for converting the output inhibition conditions.**"

In reply, the detection accuracy embodiment 2 is the same as embodiment 1 with the detection accuracy features added. Examiner relies on Okubo, Fig. 2 as identifying the predetermined inhibition pattern (col. 8 line 5) which reads on applicant's '**inhibition conditions**'. The pattern detection unit 110 (Fig. 3) and document decision unit 111 (Fig. 6) of Okubo detect whether the inputted image data is part of the inhibition pattern by doing calculations and comparing the results to **detection parameter** threshold numerical values (col. 8 line 22, 35, 41, and 58-59, col. 11 lines 22-27 – predetermined thresholds based on the inhibition pattern). The inhibit condition pattern is not a threshold value, but a pattern stored in memory. The threshold values used in detection *must be derived* from <u>converting</u> the inhibit pattern information into detection parameters for the parameters to be used in pattern detecting.

By adding accuracy, Okubo just teaches that these computed values stored in ROM can fluctuate based on user input. Thus, Okubo does suggest converting the output inhibition conditions to detection parameters.

With respect to applicant's argument on page 11 in regards to claim 8 that image data "**does not pass through any type of converter prior to reaching the pattern detection 110**".

In reply, converting data is changing the form of data from one to another. Fig. 22 shows that image data is input to the converter 1302 and line thinned image data is output from converter 1302. Thus, the data is converted from image data to line thinned image data and 1302 is a converter prior to reaching the pattern detection 110.

5. Applicant's arguments, filed 3/22/05 on page 11 in regards to claim 8 that "**There is no teaching or suggestion that the parameters are changed relate to the output characteristics of the system**", have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sekizawa (US 6430711). Okubo teaches the identification number for changing the parameters but does not specifically teach the parameters relate to the output characteristics of the system. Sekizawa, as stated below, teaches utilizing a printer identification number for identifying the output characteristics of the system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 8 – 10 and 12 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al. (US 5647010) in view of Sekizawa (US 6430711).

Regarding claim 8, Okubo teaches **an image processor** (image processing section 102; col. 7 lines 10-11) **which processes input image data** (from scanner 101) **and sends the processed data to an image output device** (to plotter 103), **comprising:**

a memory device which stores output inhibition conditions for inhibiting print of an image including a specified pattern (it is inherent that the system of Okubo includes storing various confidential or inhibited patterns in a memory [such as ROM 901] for use in the detection process of said patterns [inhibition condition pattern shown in Fig. 2]).

a converter which converts the output inhibition conditions to detection parameters according to output characteristics of the image output device (Okubo teaches the ROM storing detection parameters for the pattern detection 110 and the document decision 111 [col. 11 lines 9 – 43], thus implying that they have been converted from an inputted inhibition conditions to detection parameters; for example, a user inputs a pattern to be detected [inhibition condition as shown in Fig. 2], in order to detect such a pattern, the system converts information about the pattern into detection parameters such as thresholds and number of directions to check for pattern information [col. 11 lines 22-29]; these parameters can be according to an ID [col. 11 line 30]

The detection accuracy embodiment 2 is the same as embodiment 1 with the detection accuracy features added. The pattern detection unit 110 (Fig. 3) and document decision unit 111 (Fig. 6) of Okubo detect whether the inputted image data is part of the inhibition pattern by doing calculations and comparing the results to detection parameter threshold numerical values (col. 8 line 22, 35, 41, and 58-59, col. 11 lines 22-27 – predetermined thresholds based on the inhibition pattern). The inhibit condition pattern is not a threshold value, but a pattern stored in memory. The threshold values used in detection *must be derived* from converting the inhibit pattern information into detection parameters for the parameters to be used in pattern detecting.);

a detector which detects the specified pattern in the second image data converted by said second converter (Fig. 9, pattern detection unit 110 which uses parameter information from ROM; col. 7 lines 26-28)**; and**

a controller which controls the output of the first image data converted by said first converter, according to a result of the detection by said detector (the selector 113 controls the output of the first image data coming from the tone conversion unit [first data converter] by receiving the document decision info from the document decision unit 111 and pattern detection unit 110 and either outputting the requested document or outputting white data as generated by unit 112; col. 7 lines 33-37)**.**

While Okubo teaches inputting an identification number and having specific parameters executed according to the identification number, Okubo does not specifically teach that the identification number is a printer identification number.

Sekizawa teaches having multiple printers in a system (Fig. 2) including having serial numbers and printer names identifying the printer and thus its attributes (see Figs. 17 and 21,

wherein the printer type is associated with the serial number, Fig. 38, wherein printer information is stored including printer name, type, and serial number).

It would have been obvious to one of ordinary skill in the art that the identification number of Okubo that allows the adjustment of inhibiting accuracy could have been a printer identification number. The motivations for being the printer identification number would have been to: (1) be able to identify a printer and thus its abilities and (2) to allow multiple printers in the system of Okubo.

(1) Some printers are monochrome while some are color. If a device is monochrome, the likelihood of a person trying having an inhibited pattern in a document might be lower because most confidential documents/money have color in them as one method of forgery prevention. So thus reproducing monochrome documents can be sped up by lowering the accuracy. While if the printer is color, the system might want to take more time to analyze the document, thus raising the document (see col. 11 lines 37-43 of Okubo). The identification number of the printer inputted by the user would allow the image processing circuit to adjust accordingly.

Further examples are that some printers can only print in low quality while some have much higher quality. For those that can not print high quality, the likelihood of forgery might be lower, so adjusting the accuracy to lower to increase throughput might be advantageous.

Further examples are that some printers have their own forgery detection parameters. Thus, if a printer has excellent forgery detection mechanisms, the image processing unit 102 of Okubo might not need to be as accurate, allowing the forgery detection unit of the plotter to do the detection.

(2) By allowing the user to input the identification of the printer, the image processing circuit of Okubo can work in a system of multiple printers as taught by Sekizawa. For each print/copy job, the identification of the output device can be placed in and each job can be processed according to the accuracy desired for that particular output device. Differences in output devices and accuracies desired is discussed above.

Regarding claim 9, which depends from claim 8, Okubo teaches that **the detection parameters include at least one of color, size and resolution of the print** (detection parameters include parameters regarding the color of the print [black and white colors, col. 8 line 22, 35, 41, and 58-59, col. 11 lines 22-27]).

Regarding claim 10, which depends from claim 9, Okubo teaches that **the output inhibition conditions are independent of the input image data and the image output device** (inhibition parameters converted from inhibition conditions are stored in ROM 901 which is a read-only memory, thus no matter what type of image data is scanned in or what type of output device is chosen for the system, the patterns being detected with inhibition parameters remain independent, further the inhibition condition shown in Fig. 2B is independent of what the input image data will be or what the output device is).

Regarding claim 12, which depends from claim 8, Okubo teaches that **the detection parameters are generated for each of setting conditions of the image output device** (col. 11 lines 30-33, wherein a ID condition is set which generates particular parameters matching the ID for sending to the detection unit).

Regarding claim 13, Okubo teaches in **an image processing system** (shown overall in Fig. 1) **comprising an image processor** (image processing section 102; col. 7 lines 10-11)

which processes input image data (from scanner 101) **and outputs the processed data, and an image output device** (plotter 103) **which receives the processed data and outputs an image** (col. 7 lines 14-15), **comprising:**

a memory device which stores output inhibition conditions for inhibiting print of an image including a specified pattern (it is inherent that the system of Okubo includes storing various confidential or inhibited patterns in a memory [such as ROM 901] for use in the detection process of said patterns [inhibition condition pattern shown in Fig. 2]).

a converter which converts the output inhibition conditions to detection parameters according to output characteristics of the image output device (Okubo teaches the ROM storing detection parameters for the pattern detection 110 and the document decision 111 [col. 11 lines 9 – 43], thus implying that they have been converted from an inputted inhibition conditions to detection parameters; for example, a user inputs a pattern to be detected [inhibition condition as shown in Fig. 2], in order to detect such a pattern, the system converts information about the pattern into detection parameters such as thresholds and number of directions to check for pattern information [col. 11 lines 22-29]; these parameters can be according to an ID [col. 11 line 30]

The detection accuracy embodiment 2 is the same as embodiment 1 with the detection accuracy features added. The pattern detection unit 110 (Fig. 3) and document decision unit 111 (Fig. 6) of Okubo detect whether the inputted image data is part of the inhibition pattern by doing calculations and comparing the results to detection parameter threshold numerical values (col. 8 line 22, 35, 41, and 58-59, col. 11 lines 22-27 – predetermined thresholds based on the inhibition pattern). The inhibit condition pattern is not a threshold value, but a pattern stored in memory.

The threshold values used in detection *must be derived* from converting the inhibit pattern information into detection parameters for the parameters to be used in pattern detecting);

a detector which detects the specified pattern in the second image data converted by said second converter (Fig. 9, pattern detection unit 110 which uses parameter information from ROM; col. 7 lines 26-28); **and**

a controller which controls the output of the first image data converted by said first converter, according to a result of the detection by said detector (the selector 113 controls the output of the first image data coming from the tone conversion unit [first data converter] by receiving the document decision info from the document decision unit 111 and pattern detection unit 110 and either outputting the requested document or outputting white data as generated by unit 112; col. 7 lines 33-37).

Regarding claim 14, the structural elements of apparatus claim 8 perform all of the method steps of method claim 14. Therefore, claim 14 is rejected for the same reasons as stated in the rejection of claim 8 above.

Regarding claim 15, the program steps of claim 15 are the same steps as in the method claim 14. Further, these steps can be implemented by system controller 105 and stored in storage medium 901 for execution as a computer program. Therefore, claim 15 is rejected for the same reasons as method claim 14.

7. Claims 1 – 3 and 5 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo.

Regarding claim 1, Okubo teaches in embodiment eight **an image processor** (image processing section 102; col. 7 lines 10-11) **which processes input image data** (from scanner 101) **and sends the processed data to an image output device** (to plotter 103), **comprising:**

a first converter which converts the input image data to first image data for image forming (tone converter 109 converts the image data into data for forming as shown in the next step completed after selection is plotting; col. 7 line 25)**;**

a second converter which converts the input image data to second image data (Fig. 22, line thinning section 1302 converts the data into second data for the pattern detection unit 110) **in correspondence to a state of a print obtained by the image output device** (col. 16 lines 38-42, line thinning section 1302 thins the data in matching relation 'correspondence' to the magnification change ratio 'state' of the print that is received by the plotter 103, for example, the user selects magnification change ratio 200% [col. 16 line 3] and that data, through the flow of the image processing section, is obtained by the plotter, thus the plotter 103 obtains information regarding the state [in this case magnification of 200%] of the data to be printed)**;**

a detector which detects the specified pattern in the second image data converted by said second converter (pattern detection unit 110 which accepts data from the line thinning unit 1302; col. 7 lines 26-28)**; and**

a controller which controls the output of the first image data converted by said first converter, according to a result of the detection by said detector (the selector 113 controls the output of the first image data coming from the tone conversion unit [first data converter] by receiving the document decision info from the document decision unit 111 and pattern detection

unit 110 and either outputting the requested document or outputting white data as generated by unit 112; col. 7 lines 33-37).

While the eighth embodiment teaches the detector making decisions detecting patterns, it does not specifically teach making these decisions **based on the output inhibition conditions stored in a memory device or a memory device which stores output inhibition conditions for inhibiting print of an image including a specified pattern.**

Embodiment two (Fig. 9; col. 11) teaches making pattern detection decision **based on the output inhibition conditions stored in a memory device and a memory device which stores output inhibition conditions for inhibiting print of an image including a specified pattern** (ROM 901 which stores parameters relating to pattern detection 110; col. 11 lines 18-29).

Since the feature of adding ROM for decision accuracy was taught by Okubo already, it would have been obvious to one of ordinary skill in the art to add the memory feature of embodiment two to the image processing system of embodiment eight. Further, Okubo teaches adding such a ROM 901 to have strict control over decision accuracy, which would have been a motivation to add the ROM 91 of embodiment two to the image processing system of embodiment eight.

Regarding claim 2, which depends from claim 1, Okubo teaches that **the state of a print includes at least one of color, size and resolution of the print** (example of state used in Okubo is the magnification ratio; col. 16 lines 38-57).

Regarding claim 3, which depends from claim 1, Okubo teaches that **the output inhibition conditions are independent of the input image data and the image output device** (inhibition parameters are stored in ROM 901 which is a read-only memory, thus no matter what

type of image data is scanned in or what type of output device is chosen for the system, the patterns being detected with inhibition parameters remain independent).

Regarding claim 5, Okubo teaches in embodiment eight **an image processing system** (shown overall in Fig. 1) **comprising an image processor** (image processing section 102; col. 7 lines 10-11) **which processes input image data** (from scanner 101) **and outputs the processed data, and an image output device** (plotter 103) **which receives the processed data and outputs an image** (col. 7 lines 14-15), **comprising:**

a first converter which converts the input image data to first image data for image forming (tone converter 109 converts the image data into data for forming as shown in the next step completed after selection is plotting; col. 7 line 25)**;**

a second converter which converts the input image data to second image data (Fig. 22, line thinning section 1302 converts the data into second data for the pattern detection unit 110) **in correspondence to a state of a print obtained by the image output device** (col. 16 lines 38-42, line thinning section 1302 thins the data in matching relation 'correspondence' to the magnification change ratio 'state' of the print that is received by the plotter 103, for example, the user selects magnification change ratio 200% [col. 16 line 3] and that data, through the flow of the image processing section, is obtained by the plotter, thus the plotter 103 obtains information regarding the state [in this case magnification of 200%] of the data to be printed);

a detector which detects the specified pattern in the second image data converted by said second converter (pattern detection unit 110 which accepts data from the line thinning unit 1302; col. 7 lines 26-28)**; and**

a controller which controls the output of the first image data converted by said first converter, according to a result of the detection by said detector (the selector 113 controls the output of the first image data coming from the tone conversion unit [first data converter] by receiving the document decision info from the document decision unit 111 and pattern detection unit 110 and either outputting the requested document or outputting white data as generated by unit 112; col. 7 lines 33-37).

While the eighth embodiment teaches the detector making decisions detecting patterns, it does not specifically teach making these decisions **based on the output inhibition conditions stored in a memory device or a memory device which stores output inhibition conditions for inhibiting print of an image including a specified pattern.**

Embodiment two (Fig. 9; col. 11) teaches making pattern detection decision **based on the output inhibition conditions stored in a memory device and a memory device which stores output inhibition conditions for inhibiting print of an image including a specified pattern** (ROM 901 which stores parameters relating to pattern detection 110; col. 11 lines 18-29).

Since the feature of adding ROM for decision accuracy was taught by Okubo already, it would have been obvious to one of ordinary skill in the art to add the memory feature of embodiment two to the image processing system of embodiment eight. Further, Okubo teaches adding such a ROM 901 to have strict control over decision accuracy, which would have been a motivation to add the ROM 91 of embodiment two to the image processing system of embodiment eight.

Regarding claim 6, the structural elements of apparatus claim 1 perform all of the method steps of method claim 6. Therefore, claim 6 is rejected for the same reasons as stated in the rejection of claim 1 above.

Regarding claim 7, the program steps of claim 7 are the same steps as in the method claim 6. Further, these steps can be implemented by system controller 105 and stored in storage medium 901 for execution as a computer program. Therefore, claim 7 is rejected for the same reasons as method claim 6.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo as applied to claim 1 above, and further in view of Sato et al. (US 6047085) hereafter referred to as Sato.

Regarding claim 4, which depends from claim 1, while Okubo teaches a image processing system that can be a color copier (col. 1 line 16) including a converter for converting image data before pattern detection (discussed in rejection of claim 1), Okubo does not specifically teach that **said second converter comprises a conversion table based on measurement values of color of the print.**

Sato specifically teaches a **converter comprises a conversion table based on measurement values of color of the print** (color feature extractor for includes look-up table 2210 [shown in Figs. 21 and 29] selecting the correct inhibition parameters from dictionary data controller 120 to be sent to pattern matching section 122 – this dictionary data controller 120 acts similarly to the ROM of Okubo in that it takes in the pattern from dictionary 118, and also takes in information from keyboard 3204 [Okubo takes in ID information in for the ROM] and sends inhibition parameters to the pattern detecting section).

It would have therefore been obvious to one of ordinary skill in the art to provide color decisions pattern detections in the case where Okubo is implemented using a color copier. The motivations for doing so would have been to provide more accurate pattern detection by testing more than just black and white thresholds for pattern detection in a color copying environment.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo and Sekizawa as applied to claim 8 above, and further in view of Sato.

Regarding claim 11, which depends from claim 8, while Okubo teaches a image processing system that can be a color copier (col. 1 line 16) including a converter for converting image data before pattern detection (1302), the combination of Okubo and Sato does not specifically teach that **said converter comprises a conversion table based on measurement values of color of the print.**

Sato specifically teaches a **converter comprises a conversion table based on measurement values of color of the print** (color feature extractor for includes look-up table 2210 [shown in Figs. 21 and 29] selecting the correct inhibition parameters from dictionary data controller 120 to be sent to pattern matching section 122 – this dictionary data controller 120 acts similarly to the ROM of Okubo in that it takes in the pattern from dictionary 118, and also takes in information from keyboard 3204 [Okubo takes in ID information in for the ROM] and sends inhibition parameters to the pattern detecting section).

It would have therefore been obvious to one of ordinary skill in the art to provide color decisions pattern detections in the case where Okubo is implemented using a color copier. The

motivations for doing so would have been to provide more accurate pattern detection by testing more than just black and white thresholds for pattern detection in a color copying environment.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US-6621922, Takaragi et al., 9-16-2003: teaches an image processing system and electronic apparatuses, see specifically Fig. 6 and 24 and the discussion on using model number with inhibited copies.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Divine whose telephone number is 571-272-7432. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KING Y. POON
PRIMARY EXAMINER

Lucas Divine
Examiner
Art Unit 2624

ljd